REMARKS

Claims 1-29, 44-48, and 55-58 are pending in the present application, of which claims 1, 15, 18, 20, 26, 44, and 55 are amended. Applicant believes that the present application is in condition for allowance, which prompt and favorable action is respectfully requested.

I. REJECTIONS UNDER 35 U.S.C. §112

The Office Action rejected claim 55 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, the Office Action notes that claim 55 is unclear. Applicant has amended claim 55 to more clearly recite the limitations claimed.

II. REJECTION UNDER 35 U.S.C. §103

Claims 1-2, 4-19, and 44-48

The Office Action rejected claims 1-2, 4-19, and 44-48 under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 6,463,537 issued to Tello in view of U.S. Patent No. 7,146,500 by Hawkins et al. (hereinafter "Hawkins"). In view of the amendments to independent claims 1, 15 and 44, the rejection is moot.

In order to clarify the claims, independent claims 1, 15 and 44 are herein amended. Applicant submits that these amendments clarify previously inherent features and do not narrow the scope of the amended claims.

With reference to claims 1-2, 4-19, and 44-48, it is respectfully submitted that a prima facie case has not been met.

The Office has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Piasecki*, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787 (Fed. Cir. 1984).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, the prior art references must teach or suggest all the claim limitations. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Third, there must be a reasonable expectation of success. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.

Claimed Elements are Not Taught or Suggested by the Prior Art

As to *Claim 1* Applicant submits that Tello and Hawkins fail to teach "at least one actuator … configured to activate the private key" and "a signature generator … to generate a digital signature when the actuator is activated" as claimed. The Office Action relies primarily on Tello as teaching these limitations. The Office Action alleges that an "actuator" is something that puts something into action, and relies on a battery backup circuit 311 Tello as putting a microprocessor 125 into action. However, as used in the present application, an "actuator" is something that causes a private key to be activated and a signature to be generated based on such private key. Similarly, while Hawkins discloses a method for securing a computer by preventing the computer from booting up unless a complementary encrypted digital signature is provided, it fails to disclose an activator as claimed. Consequently, Applicant submits that neither Tello or Hawkins teach an actuator as claimed.

As to independent claims *1, 15, and 44*, neither Tello nor Hawkins teach a "signature generator … to generate a digital signature … being a function of the private key and the time element" and "an emitter … to emit the secure identifier to authenticate the user to an

external authentication receiver, the secure identifier comprising the digital signature, time element, and public key information" as claimed. Tello teaches a computer motherboard having a security engine that authenticates a user prior to permitting access to the computer. Tello mentions the use of a public-private key algorithm to secure data transmissions (Col. 8, lines 34-40 and Col. 15, lines 5-20) but it never mentions generating a digital signature based on a private key and time element for authentication purposes as claimed. Even the "hash number" (Col. 5, lines 19-28) in Tello is not generated based on a private key (of a public-private key pair) as claimed. Hawkins describes a method for uniquely signing an electronic record at a repository (Col. 6, lines 64-69, and Col. 7, lines 1-20). That is, once a record 6 is received at a repository 5, a first receipt 7 is prepended to the beginning of record 6 and a second receipt 8 (e.g., a time stamp) is appended at the end of record 6 (Col. 7, lines 1-10). Unlike the present claimed invention where the digital signature is generated based on a timestamp prior to transmission of the digital signature to authenticate a user, Hawkins appends a timestamp after the electronic record is received at the repository and is not used to authenticate anything but merely to create an authoritative record. (See Col. 7, lines 10-20). Consequently, Tello and Hawkins fail to teach these claimed limitations.

No Motivation to Combine Cited References

Assuming, *arguendo*, that every claimed element is taught by the prior art, Applicant further submits that there is no motivation to combine Tello and Hawkins as alleged in the Office Action.

"In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013,

1016, 173 USPQ 560, 562 (CCPA 1972). The teaching or suggestion to make the claimed combination must be found in the prior art, not in the Applicant's disclosure.

Tello teaches a computer motherboard having a security engine that authenticates a user prior to permitting access to the computer. Hawkins teaches a method for completing electronic transactions by appending a timestamp after an electronic record is received at the repository (Col. 6, lines 64-69, and Col. 7, lines 1-20). However, there is no objective teaching in the prior art to combine Tello and Hawkins, particularly since Hawkins does not teach a user authentication method at all (as Tello) but rather a way to make a received record into an authoritative record.

No Reasonable Expectation of Success

Tello teaches a computer motherboard having a security engine that authenticates a user prior to permitting access to the computer. Hawkins teaches a method for completing electronic transactions by appending a timestamp after an electronic record is received at the repository (Col. 6, lines 64-69, and Col. 7, lines 1-20). Tello (a motherboard with a security engine for access control) and Hawkins (securing of electronic transactions at a repository) are vastly different systems and solve very different problems. Applicant submits that there is no reasonable expectation of success in combining these very different systems, particularly since Tello is aimed at user authentication while Hawkins a way to mark a record once it has been received at a repository.

Therefore, Applicant respectfully submits that the Examiner has failed to set forth a prima facie case of obviousness as to claims 1, 15, and 44.

As to dependent claims 2, 4-14, 16-19, and 45-48, Applicant submits that Tello and Hawkins also fail to teach the limitations recited therein, but that they are allowable as a result of their dependence on independent claims 1, 15, and/or 44.

Claims 3 and 23

The Office Action rejected claims 3 and 23 under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 6,463,537 issued to Tello in view of U.S. Patent No. 7,146,500 by Hawkins et al. (hereinafter "Hawkins") and further in view of U.S. Patent No. 5,784,464 issued to Akiyama et al. (hereinafter "Akiyama").

Claimed Elements are Not Taught or Suggested by the Prior Art

As to dependent *Claims 3 and 23*, Applicant submits that Tello, Hawkins, and Akiyama fail to teach "the time element comprises a predetermined number of least significant bits of the time" Claim 3) and "time tolerance information comprises information regarding clock drift" (Claim 23) as claimed. The Office Action concedes that Tello and Hawkins fail to teach these limitations and relies on Akiyama instead. While Akiyama may teach the use of a "timer", such timer is used as a scheduler or alarm to (Col. 18, lines 53-55) and does not teach that such timer comprises "a predetermined number of least significant bits of the time" or that it "comprises information regarding clock drift" as claimed.

No Motivation to Combine Cited References

Assuming, *arguendo*, that every claimed element is taught by the prior art, Applicant further submits that there is no motivation to combine Tello, Hawkins, and Akiyama as alleged in the Office Action.

"In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). The teaching or suggestion to make the claimed combination must be found in the prior art, not in the Applicant's disclosure.

Tello teaches a computer motherboard having a security engine that authenticates a user prior to permitting access to the computer. Hawkins teaches a method for completing electronic transactions by appending a timestamp after an electronic record is received at the repository (Col. 6, lines 64-69, and Col. 7, lines 1-20). Akiyama teaches a key management method for authenticating a client in which keys are regularly changed according the timer. However, there is no objective teaching in the prior art to combine Akiyama with Tello and Hawkins, particularly since the timer in Akiyama is used as a scheduler or alarm rather than an authentication mechanism as claimed.

No Reasonable Expectation of Success

Assuming, *arguendo*, that every claimed elements are taught by the prior art, Applicant submits that there is no reasonable expectation of success in combining the elements in the cited prior art references Tello, Hawkins, and Akiyama. Each of these references describes different security schemes for different types of applications. Tello teaches a computer motherboard having a security engine that authenticates a user prior to permitting access to the computer. Hawkins describes a method for uniquely signing an electronic record at a repository for purposes of data validation. Akiyama describes a server-centric key management scheme that manages access requests by mobile/portable user modules. These references each operate on distinct system architectures that are not readily combinable. Consequently, Applicant submits that there is reasonable expectation of success in combining Tello, Hawkins, and Akiyama.

Therefore, Applicant respectfully submits that the Examiner has failed to set forth a prima facie case of obviousness as to claims 3 and 23.

Claims 20-29 and 55-58

The Office Action rejected claims 20-29 and 55-58 under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 6,463,537 issued to Tello in view of U.S. Patent No. 7,146,500 by Hawkins et al. (hereinafter "Hawkins") and further in view of U.S. Patent No. 6,889,209 issued to Rabin et al. (hereinafter "Rabin"). In view of the amendments to independent claims 1, 15 and 44, the rejection is moot.

In order to clarify the claims, independent claims 20, 26 and 55 are herein amended. Applicant submits that these amendments clarify previously inherent features and do not narrow the scope of the amended claims.

Claimed Elements are Not Taught or Suggested by the Prior Art

As to *Claims 20, 26, and 55*, Applicant submits that Tello, Hawkins, and Rabin fail to teach "a receiver configurable to receive a secure identifier for authenticating a sender, … comprising … a digital signature … comprising information derived from a private key" and "a receiver configurable to receive … a secure identifier comprising … a public key identifier corresponding to a public key associated with the sender being authenticated", and "a receiver configurable to receive … a secure identifier comprising … a time identifier". Tello teaches a computer motherboard having a security engine that authenticates a user prior to permitting access to the computer. Tello mentions the use of a public-private key algorithm to secure data transmissions (Col. 8, lines 34-40 and Col. 15, lines 5-20) but not receiving a digital signature derived from a private key for authentication purposes as claimed. Even the "hash number" (Col. 5, lines 19-28) in Tello is not generated based on a private key (of a public-private key pair) as claimed. Hawkins describes a method for uniquely signing an electronic record at a repository (Col. 6, lines 64-69, and Col. 7, lines 1-20). That is, once a record 6 is received at a repository 5, a first receipt 7 is prepended to the beginning of record 6 and a second receipt 8 (e.g., a time stamp) is appended at the end of record 6 (Col. 7, lines 1-10). Unlike the present claimed invention where the digital signature is generated based on

a private key prior to reception of the digital signature to authenticate a sender, Hawkins appends a timestamp after the electronic record is received at the repository and is not used to authenticate anything but merely to create an authoritative record. (See Col. 7, lines 10-20). Likewise, Rabin discloses a method for authenticating. Rabin describes a method for inhibiting software piracy in which a user device operating the software calls-up a guardian center when the software is executed. The user device reports certain values to the guardian center which are used to verify whether other user devices are utilizing illegal copies of the software (Col. 6, lines 25-60). Such security scheme does not really authenticate a user, as claimed, but rather prevents multiple devices from executing illegitimate copies of software operating on said user devices. Thus, Rabin too fails to teach reception of a digital signature to authenticate a sender.

Consequently, Tello, Hawkins, and Rabin fail to teach these claimed limitations.

No Motivation to Combine Cited References

Assuming, *arguendo*, that every claimed element is taught by the prior art, Applicant further submits that there is no motivation to combine Tello, Hawkins, and Akiyama as alleged in the Office Action.

"In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). The teaching or suggestion to make the claimed combination must be found in the prior art, not in the Applicant's disclosure.

Tello teaches a computer motherboard having a security engine that authenticates a user via a locally-connected smartcard having a user identifier prior to permitting access to the computer. Hawkins teaches a method for completing electronic transactions by

appending a timestamp after an electronic record is received at the repository (Col. 6, lines 64-69, and Col. 7, lines 1-20). Rabin teaches a security scheme for preventing multiple user devices from executing illegitimate copies of software operating on said user devices. These prior art references are all aimed at solving different problems distinct from the present claimed invention. The combinations suggested in the Office Action do not involve mere trivial changes to the prior art but entail wholesale changes to the architecture taught by Tello that are not taught or suggested by the cited prior art references. Consequently, none of these references provide an objective teaching to combine Rabin with Tello and Hawkins.

No Reasonable Expectation of Success

Applicant further submits that there is no reasonable expectation of success in combining the elements in the cited prior art references Tello, Hawkins, and Rabin. Each of these references describes different security schemes for different types of applications. These references each operate on distinct system architectures that are not readily combinable. Consequently, Applicant submits that there is reasonable expectation of success in combining Tello, Hawkins, and Rabin.

Therefore, Applicant respectfully submits that the Examiner has failed to set forth a prima facie case of obviousness as to claims 20, 26, and 55.

As to *Claims 21, 27 and 56,* Applicant submits that Tello, Hawkins, and Rabin fail to teach that the "digital signature further comprises a PIN, and where receiving further comprises decrypting at least a portion of the digital signature using the PIN" as claimed. The Office Action relies primarily on Tello as teaching these limitations. However, Tello, as well as Hawkins and Rabin fail to teach this limitation. The cited portions of Tello (Col. 9, lines 5-8) do no disclose this limitation. Thus, Tello, Hawkins, and Rabin fail to teach the claimed method within the recited system architecture.

As to dependent claims 21-25, 27-29, and 56-58, Applicant submits that Tello, Hawkins, and Rabin also fail to teach the limitations recited therein, but that they are allowable as a result of their dependence on independent claims 20, 26, and 55.

For at least the foregoing reasons, Applicant respectfully requests a withdrawal of the rejection under 35 U.S.C. §103.

Applicant has reviewed the references made of record and asserts that the pending claims are patentable over the references made of record.

CONCLUSION

In light of the amendments contained herein, Applicant submits that the application is in condition for allowance, for which early action is requested.

Applicant requests a one month extension of time in which to respond to the Office Action dated December 15, 2006. Please charge the requisite extension fee to Deposit Account No. 17-0026. Please charge any other fees associated with this paper to deposit Account No. 17-0026.

Respectfully submitted,

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